

IN THE CLAIMS

1. (currently amended) A buffer unit for ~~fragmenting variable-length packets into~~ processing fixed-length packets for that have been fragmented from variable-length packets, said processing being performed in units of fixed-length packets, comprising:

a fixed-length packet storing ~~means for storing~~ part configured to store the fixed-length packets for each of a plurality of output paths;

a multicasting processing ~~part configured to store~~ means for storing multicasting packets having a plurality of destinations, and to transfer ~~transferring~~ the multicasting packets to said fixed-length packet storing ~~means~~ part depending on the plurality of destinations; and

a control ~~part configured to monitor~~ means for monitoring a storage state of said fixed-length packet storing ~~part~~ means, and to carry ~~carrying~~ out a control so that the multicasting packets are transferred between ~~within~~ a variable-length packet formed by a plurality of fixed-length packets and a next variable-length packet.

2. (currently amended) The buffer unit as claimed in claim 1, further comprising:

a multicasting packet storing ~~part configured to store~~ means for storing the multicasting packets having the plurality of destinations, and to transfer ~~transferring~~ the plurality of multicasting packets to said multicasting processing ~~part~~ means after a plurality of multicasting packets forming a single variable-length packet are received.

3. (currently amended) The buffer unit as claimed in claim 2, wherein said multicasting packet storing ~~means~~ part cancels the single variable-length packet when a defect is detected in

one of the fixed-length packets or the multicasting packets forming the single variable-length packet.

4. (currently amended) A buffer unit for ~~fragmenting variable-length packets into~~ processing fixed-length packets for that have been fragmented from variable-length packets, said processing being performed in units of fixed-length packets, comprising:

a fixed-length packet storing part means, including first and second packet storing sections, ~~for storing~~ configured to store the fixed-length packets for each of a plurality of output paths;

a multicasting processing part configured to store ~~means for storing~~ multicasting packets having a plurality of destinations, and to transfer ~~transferring~~ the multicasting packets to said second packet storing section depending on the plurality of destinations; and

a control section configured to monitor ~~means for monitoring~~ a storage state of one of said first and second packet storing sections, and carrying out a control so that reading from said first and second packet storing sections is switched in units of a variable-length packet which is formed by a plurality of fixed-length packets.

5. (currently amended) The buffer unit as claimed in claim 4, further comprising:

a multicasting packet storing part configured to store ~~means for storing~~ the multicasting packets having the plurality of destinations, and to transfer ~~transferring~~ the plurality of multicasting packets to said multicasting processing part means after a plurality of multicasting packets forming a single variable-length packet are received.

6. (currently amended) The buffer unit as claimed in claim 5, wherein said multicasting packet storing part means cancels the single variable-length packet when a defect is detected in one of the fixed-length packets or the multicasting packets forming the variable-length packet.

7. (currently amended) A buffer unit for ~~fragmenting variable-length packets into~~ processing fixed-length packets for that have been fragmented from variable-length packets, said processing being performed in units of fixed-length packets, comprising:

a temporary storing part configured to store means for storing the fixed-length packets and to output outputting a plurality of fixed-length packets forming a single variable-length packet after the plurality of fixed-length packets are received;

a fixed-length packet storing part configured to store means for storing the plurality of fixed-length packets output from said temporary storing part means for each of a plurality of output paths; and

a multicasting processing part configured to store means for storing multicasting packets having a plurality of destinations, and to transfer transferring the multicasting packets to said fixed-length packet storing part means depending on the plurality of destinations.

8. (currently amended) The buffer unit as claimed in claim 7, further comprising:

a multicasting packet storing part configured to store means for storing the multicasting packets having the plurality of destinations, and to transfer transferring the plurality of multicasting packets to said multicasting processing part means after a plurality of multicasting packets forming a single variable-length packet are received.

9. (currently amended) The buffer unit as claimed in claim 8, wherein one of said temporary storing part means and said multicasting packet storing part means cancels the single variable-length packet when a defect is detected in one of the fixed-length packets or the multicasting packets forming the single variable-length packet.

10. (canceled)

11. (currently amended) A buffer unit for ~~fragmenting variable-length packets into~~ processing fixed-length packets for that have been fragmented from variable-length packets, said processing being performed in units of fixed-length packets, comprising:

a first storing part configured to store ~~means for storing~~ the fixed-length packets, and to output ~~outputting~~ a plurality of fixed-length packets forming a single variable-length packet when the plurality of fixed-length packets are received;

a second storing part configured to store ~~means for storing~~ the plurality of fixed-length packets output from said first storing part means for each of a plurality of output paths; and

a multicasting processing part configured to store ~~means for storing~~ multicasting packets having a plurality of destinations, and to transfer ~~transferring~~ the multicasting packets to said second storing section depending on the plurality of destinations,

outputs of said first storing part means and said multicasting processing part means being switched in units of a variable-length packet which is formed by a plurality of fixed-length packets.

12. (currently amended) A switching apparatus for ~~fragmenting variable-length packets~~
~~into~~ processing fixed-length packets ~~for~~ that have been fragmented from variable-length packets,
said processing being performed in units of fixed-length packets, comprising:

an input buffer section receiving multicasting packets having a plurality of destinations or
unicasting packets having a single destination;

a switching section switching the multicasting packets or the unicast packets received
from said input buffer section depending on the destination of each packet; and

an output buffer section receiving fixed-length packets from said switching section
depending on output paths, and defragmenting the fixed-length packets into the variable-length
packets,

said input buffer section outputting a plurality of fixed-length packets in units of a
variable-length packet which is formed by a plurality of fixed-length packets.

13. (canceled)